NGDA Dataset Report

Official NGDA Title: Traffic Analysis Zone

Metadata Record Title: TIGER/Line Shapefile, 2011, Series Information File For The 2010 Census Traffic Analysis Zone (TAZ) State-Based Shapefile

A–16 NGDA Theme: Transportation

Executive NGDA Theme Champion(s):

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Metadata:

Registration Status: Complete

Registered on 3/27/2015

GeoPlatform Link*: https://www.geoplatform.gov/node/243/0d371a42-a52e-4792-8066-f201ebc9079f

Data.gov Metadata Link*: http://catalog.data.gov/harvest/object/497db2e9-c90b-47e6-816e-01f30bee9027/html

*If the metadata has been updated and reharvested after publication of this report, the link may no longer be valid. The dataset may be searched for manually in Data.gov or GeoPlatform.gov.

NGDA Lifecycle Maturity Assessment (LMA) Report

Time Frame:

Baseline assessment responses include dataset activities from 1998 to 2015.

LMA Submission:

Status: Complete

Date: 9/30/2015

Extension Requested: Yes

LMA Reviewer(s):

Supervisor: Did not review

Theme Lead: Lynda A Liptrap, Chief, Federal Geographic Coordination Branch

Executive Champion: Did not review

SAOGI*: Did not review

Other: Laura L Waggoner, Assistant Division Chief, Geographic Partnerships, Data Collection, a

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Attachments:

To get access to any attachments referenced in the report, email the LMA Help Desk at NGDA_LMA_help@fgdc.gov. Please use the subject "Dataset Report Attachment(s)" and indicate the associated official NGDA title.

*Senior Agency Official for Geospatial Information (SAOGI)

Lifecycle Maturity Assessment (LMA) Summary

Overall Maturity:

Mature; Consistent

General Questions: 100%
Optimized; Established

Stage 1 - Define/Plan: 100%
Optimized; Established

Stage 2 - Inventory/Evaluate: 100%
Optimized; Established

Stage 3 - Obtain: 100%
Optimized; Established

Stage 4 - Access: 100%
Optimized; Established

Stage 5 - Maintain: 100%
Optimized; Established

Stage 6 - Use/Evaluate: 100%
Optimized; Established

Stage 7 - Archive: 0%
No Activity

NGDA Dataset Maturity Definitions:

How To Calculate Maturity: https://www.geoplatform.gov/sites/default/files/How_to_Calculate_Maturity.pdf

Maturity	Maturity Characteristics for All Lifecycle Stages
Optimized; Established Rank = 5	Dataset meets virtually all business needs of all users. The dataset is considered authoritative by owners and secondary users. It is curated across all stages of the approved lifecycle. Future needs are defined on a regular basis and resources for addressing both current and future business requirements are available.
Mature; Consistent Rank = 4	Dataset meets all the business needs of the primary owner and most of the secondary users. The dataset is curated and used as authoritative by the primary owner. Dataset is used widely by secondary users actively engaged in sustaining the dataset. Future needs are identified and steps are planned to address these. All stages are supported and reviewed on a recurring basis. The dataset is well managed in relation to the approved lifecycle.
Managed; Predictable Rank = 3	Dataset meets a significant number of the business needs of the primary owner and is widely used as an authoritative resource by secondary users. Benchmark activities are occurring in at least four of the approved lifecycle stages. Management practices in relation to the approved lifecycle is moderate but consistent. Dataset is integrating changing business requirements in lifecycle stages impacting overall maturity.
Transition; Transformation Rank = 2	Dataset meets business needs of the primary owner and has moderate use by secondary users. Benchmark activities are occurring in at least three stages. Efforts to integrate funding, include partners, and obtain data are not supported in a sustained manner. Management practices in relation to the stages of the approved lifecycle is limited.
Planned; Initial Development Rank = 1	Dataset limited in meeting business needs of the primary owner. Benchmark activities in the approved lifecycle are just starting to consider secondary uses, partnerships are forming to support additional dataset uses. Dataset development is in a very early stage. Minimal or limited management against the benchmarks in the approved lifecycle.
No Activity Rank = no activity	Dataset meets project or local business needs of the primary owner, secondary or additional uses or users were not considered, not recognized as an authoritative data or is part of a similar dataset. Not managed to any of the benchmarks in the approved lifecycle.

General Questions for All Stages

1) Is there a recurring process to obtain funding for all lifecycle stages of this dataset?

Answer: Funding support is part of agency budget on a recurring basis, funding is consistent and tied to business processes, and supports all lifecycle stages.

Justification Comment: **Attachment(s):** 0

Funding primarily comes from the project sponsors, the Federal Highways Administration (FHWA) and the American Association of State Highway Transportation Officials (AASHTO) supplemented by funding appropriated to the Census Bureau's Decennial Census Management Division.

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2) Is there a process in place to ensure that open government and transparency guidelines are followed in all lifecycle stages for this dataset?

Answer: Process is published as appropriate with respect to sensitivity requirements, process is transparent, published appropriately.

Justification Comment: **Attachment(s):** 0

The Transportation Analysis Zone (TAZ) program is a comprehensive source of data on commuters and commuting patterns for transportation planning. Tabulation sponsored by state departments of transportation under a pooled funding arrangement with the American Association of State Highway and Transportation Officials (AASHTO).
The TAZ program was developed with the participation of the transportation community the FHWA, AASHTO, and various individual Metropolitan Planning Organizations and State Highway Departments. TAZ delineation guidelines and all applicable materials were provided to partners prior to the start of the program and are also currently available to the public.
In addition a new requirement to create a Traffic Analysis District (TAD) geography was added based on sponsor requests for 2010.
Metadata for this dataset is published to federal portals to enable discovery.
There are also a number of external and internal standards pertaining to data accessibility, data security, and data confidentiality that apply to this dataset such as:
Section 508 of the Workforce Investment Act of 1998 mandates that when developing, procuring, maintaining, or using electronic and information technology, each Federal department or agency, including the United States Postal Service, shall ensure, unless an undue burden would be imposed on the department or agency, that the electronic and information technology allows, regardless of the type of medium of the technology.
-individuals with disabilities who are Federal employees to have access to and use of information and data that is comparable to the access to and use of the information and data by Federal employees who are not individuals with disabilities; and
-individuals with disabilities who are members of the public seeking information or services from a Federal department or agency to have access to and use of information and data that is comparable to the access to and use of the information and data by such members of the public who are not individuals with disabilities
The following links provide information on the data security and confidentiality protocols that apply to the dataset:
-Bureau of the Census Handbook for Information Technology Security located at http://cww.census.gov/po/ims/revpolhandbk2.pdf
-Title 13 U.S.C. OMB No. 0607-0809 located at http://cww.census.gov/po/legislate/13usc.htm

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3) Are there processes and tools in place so that staff are sufficiently knowledgeable to ensure a continuity of the dataset for all stages of the lifecycle, especially during staffing transitions?

Answer: Processes and tools to ensure dataset continuity are in place and implemented for all lifecycle stages.

Justification Comment: **Attachment(s):** 0

Staff roles and responsibilities are defined and there is ongoing, informal training such as seminars on Census geography, data, and products. In general, the maintenance of the boundary and feature data contained in the TIGER/Line Shapefiles are delegated to the subject matter experts (SMEs) for each geographic boundary or feature. These SMEs follow their own respective data maintenance procedures, which include identifying key personnel and assigning tasks for data maintenance, projects and training.

The Software Requirements Specifications (SRS) document for the TIGER/Line Shapefiles is maintained and updated with each iteration of the public release of the shapefiles.
The TIGER/Line technical documentation exists and is maintained. It can be viewed at:
http://www2.census.gov/geo/pdfs/maps-data/data/tiger/tgrshp2014/TGRSHP2014_TechDoc.pdf

STAGE 1 - Define/Plan

4) Are user and business requirements defined and formalized?

Answer: A recurring process is in place, including defining new partner and stakeholder business needs as they arise, and is fully implemented.

Justification Comment: **Attachment(s):** 0

The basic data requirements for the TAZ program were largely developed by the external sponsors (FHWA/AASHTO).
Information on the data products can be accessed here:
http://www.fhwa.dot.gov/planning/census_issues/ctpp/data_products/tazfaq.cfm
Information on the business rules can be accessed here:
http://www.fhwa.dot.gov/planning/census_issues/ctpp/data_products/tazddbrules.cfm
The expectation is that the sponsors will remain the same for future iterations of the program. Changes to delineation requirements for future iterations would be made to the existing documentation. Partnership software requirements in particular would be included within the overall Geographic Update Partnership Software (GUPS) software development.

5) How are partners/stakeholders involved in the requirements collection process?

Answer: A recurring process is in place, including defining new partner and stakeholder business needs as they arise, and is fully implemented.

Justification Comment: **Attachment(s):** 0

The Traffic Analysis Zone (TAZ) product is in wide use in the transportation planning community. External stakeholders have developed custom applications using the data. The appropriate branches have addressed data users' questions as they arose.
The Geography Division subject matter experts comprise the internal partners, stakeholders and stewards of the geospatial products. All subject matter experts, including those who work directly with the public users, regularly contribute to the dataset and resource requirements and maintenance of the dataset. Roles and responsibilities, including which office is responsible for submitting requirements for the data, are clearly defined through the program-specific workflow charts and the Geography Division Management Information System (GEO MIS).

6) Is there a quality assurance process for the dataset?

Answer: Quality assurance published as appropriate with respect sensitivity requirements.

Justification Comment: **Attachment(s):** 0

All public products are reviewed with manual and automated quality assessment procedures prior to release. In addition, source data from partnerships must pass accuracy tests before being integrated with TIGER.
All QA processes are documented including instructions to the QA analysts, notes and progress

reports. The QA requirements are reviewed during each iteration of production and are updated as needed.

7) Is there a process to evaluate the sensitivity, privacy, and confidentiality of this dataset?

Answer: Sensitivity, privacy, and confidentiality evaluations fully implemented, reviewed and updated on a recurring basis.

Justification Comment: **Attachment(s):** 0

All of the geospatial data products are Title 13 compliant, including shapefiles and relationship files that contained address ranges. The address range subject matter experts employ data suppression techniques in those data records with unique and/or single-range addresses. All files are reviewed through quality assurance checks prior to every public release to ensure that the data are Title 13 compliant.

8) Are defined data standards used in collecting, processing, and/or rendering the data?

Answer: Standards fully implemented documented and published as appropriate.

Justification Comment: **Attachment(s):** 0

GSS-I guidelines are used to standardize data collected from partners. Internal database imbedded business rules are used to standardize processes. Standardized procedures are used for rendering cartographic products and web services.
All state and state equivalent dataset information submitted by local partnerships through local or state governments, must meet the minimal guidelines as outlined in the Geography Division's Optimal and Minimal Feature Data Submission Guidelines.
The geographic concepts, record layouts, metadata attributes, values and definitions for rendering TIGER/Line shapefiles are synthesized in the TIGER/Line Shapefile technical documentation and shapefile metadata.

STAGE 2 - Inventory/Evaluate

9) Is there a process for determining if data necessary to meet requirements already exist from other sources (either within or outside the agency) before collecting or acquiring new data?

Answer: Process for determining appropriate data is being reused fully implemented, reviewed, and updated on a regular basis.

Justification Comment: **Attachment(s):** 0

Previous TAZ delineations are reviewed before new delineations are introduced.
While state and local agencies sometimes maintain their own TAZ datasets, their small sizes are often not appropriate for Census data tabulation, which is the main reason (other than a desire for nationwide coverage) that the project sponsors the program. No other nationwide TAZ or TAD representation exists.

STAGE 3 - Obtain

10) Is there a process for obtaining data in relation to this dataset?

Answer: Process is fully implemented, reviewed and updated on a regular basis.

Justification Comment: **Attachment(s):** 0

The boundary, feature and address data used to modify, update and transform legacy data are primarily obtained from our tribal, state, county, and local partners through our partnership programs and the Geographic Support System Initiative (GSS-I).
The GSS Initiative is an integrated program of improved address coverage, continual spatial feature updates, and enhanced quality assessment and measurement. For more information on the GSS-Initiative visit, http://www.census.gov/geo/www/gss/
Information on the data acquisition plan and content specifications can be found on the program websites:

http://www.census.gov/geo/partnerships/

http://www.census.gov/geo/www/gss/
The data acquired through the Partnership Programs or through GSS-I is reviewed, updated and implemented on a regular basis.

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11) Is the metadata in a FGDC endorsed geospatial metadata standard?

Answer: Metadata is available in a format endorsed by the FGDC, it fully describes the dataset and provides all the information required to make the dataset discoverable, accessible, and usable.

Justification Comment: **Attachment(s):** 0

Metadata is published and available to the public for the TIGER/Line shapefile product. The metadata is in the ISO 19115 format and is discoverable through federal data portals and packaged with the downloadable files. The metadata template is specified in internal Census requirements documents for the public TIGER/Line Shapefiles.

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12) How complete is the geographic coverage as defined in the requirements for the dataset?

Part 1 Answer: Business requirements for cyclic updates identified and a process is in place.

Part 2 Answer: Dataset has presently attained the greatest geographic coverage as defined by the current requirements or roughly 100%.

Justification Comment: **Attachment(s):** 0

The TIGER/Line Shapefiles covers the entire United States and the District of Columbia, which is the defined coverage area.
This coverage is required in order to support the data collected in the decennial Census, Economic Census, Population Estimates and the American Community Survey.

STAGE 4 - Access

13) Do you have a process for providing users access to the data in an open digital machine readable format?

Answer: User access process is fully implemented, data is available, process is reviewed and updated on a recurring basis.

Justification Comment: **Attachment(s):** 0

Metadata is published and available to the public for the TIGER/Line shapefile product. The metadata is in the ISO 19115 format and is discoverable through federal data portals and packaged with the downloadable files. The metadata template is specified in internal Census requirements documents for the public TIGER/Line Shapefiles.

STAGE 5 - Maintain

14) Is there a maintenance process for updating and storing the dataset?

Answer: Dataset maintenance process is fully implemented and processes are reviewed and periodically updated.

Justification Comment: **Attachment(s):** 0

TIGER, to include TAZ and TAD, is stored in the MAF-TIGER Database (MTDB) . Business rules, geographic area edits and core Application Program Interface (API) rules are in place to maintain the geography. The business rules and core API reduce the chance that geography is altered in error. The business rules are well-documented and updated when new geography or geographic relationships are added. The versioning of the data is well organized by the benchmarking process and creation of benchmark specific shapefiles. There is documentation for the business rules, geographic area edits, core API, benchmarking, and database/products vintages, which is Census Bureau versioning. The data are typically updated continuously through various programs and operations.

15) Is there an error correction process as part of dataset maintenance?

Answer: Error correction process includes user notification, process reviewed on a recurring basis.

Justification Comment: **Attachment(s):** 0

Any feedback from external users which result in change to the TIGER/Line Shapefiles are documented through the production processes of the next shapefile release. If a large-scale error or errors are found after undergoing quality assurance, the files are removed from the website, a note is posted about the error, the error is logged into a tracking database, and new files may be created and released. The timing of the correction and release of new data varies based on the situation.

STAGE 6 - Use/Evaluate

16) Is there a process to determine if the dataset meets user needs?

Answer: Process is fully implemented and repeated on a recurring basis.

Justification Comment: **Attachment(s):** 0

External program sponsors (FHWA/AASHTO) are the primary users and disseminators of the data and are expected to communicate any issues and assess whether the dataset meets the transportation community's needs. Any shortcomings documented by the program sponsors or other users may be addressed in future iterations of the program requirements and any software development efforts.
For Census internal customers, requirements are reviewed annually and updated as needed.
Externally, there is no formal established feedback process with requirements for the data. However, users of the TIGER/Line Shapefiles are encouraged to contact the Geography Division to provide feedback. Most feedback generally focuses on the availability of different formats in which the data is offered, as opposed to feedback on the content of the data.
Feedback is submitted via phone call, email or in-person at conference workshops. Any comments received from the public which could possibly improve upon the product is communicated back to the Geography Division for consideration, and where applicable, implementation.

17) Is there a process to provide users information on how to access and properly use the dataset?

Answer: Process is fully implemented supporting access and proper use, process is reviewed on a recurring basis.

Justification Comment: **Attachment(s):** 0

Yes, the CTPP Transportation Analysis Zones (TAZ) page. The information on the page will help the user to understand, delineate and manage TAZ and the TAZ process.
The page is located at:
http://ctpp.transportation.org/Pages/taz.aspx

18) Are the business processes and management practices assessed to meet changing technology?

Answer: Assessment process is fully implemented for taking advantage of changing technology, process is reviewed on a recurring basis.

Justification Comment: **Attachment(s):** 0

Program requirements are reviewed in advance of the maintenance cycles to ensure that any advances in technology processes, or data can be applied if appropriate.

STAGE 7 - Archive

19) Is there an archiving process for the dataset?

Answer: No archival or disposition process.

Justification Comment: **Attachment(s):** 0

Census does not maintain CD/DVD copies of TAZ data. The data is available at:
http://www.census.gov/geo/partnerships/bas/bas_download.html
There is also a way to download shapefiles of 2010 Census tabulation blocks, 2010 TAZs, and 2010

TADs that are topologically related to each other by going to the Boundary and Annexation Survey (BAS) Shapefiles webpage at http://www.census.gov/geo/partnerships/bas/bas_download.html and downloading the county-level files in which you are interested. Currently the shapefiles available at this webpage are from the BAS15 benchmark. Each county-based ZIP file downloaded from this site contains many different shapefiles, three of which are the 2010 blocks ("tabblock2010"), the 2010 TAZs ("taz2010"), and the 2010 TADs ("tad2010"). The boundaries of these three geographic areas will spatially align since they were created from the same vintage, i.e., 2010 Census, in the same MTdb benchmark, i.e., BAS15. Unfortunately, if you are interested in state-based shapefiles, you will need to download all of the county-level files for a state and merge them together in a GIS to create a state-based shapefile for census tabulation blocks, TAZs, and/or TADs.